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AUTHOR Andrew, Loyd D.; Henry, Thomas A.
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ABSTRACT

The question of whether two-year colleges with and without faculty unions differ in terms of selected institutional characteristics was investigated. Attention was directed to expenditures spent on instruction, the percentage of revenue obtained from various sources, the educational costs per full-time equivalent student, the faculty-student ratio, and the average faculty salary. Data for the study were obtained from the 1979-1980 Higher Education General Information Survey. The study population was 319 public two-year colleges, 189 of which had faculty bargaining units and 130 of which did not have faculty bargaining. Findings include the following: both groups of institutions devoted the majority of expenditures to instructional costs; faculty at colleges with unions earned a higher average salary and taught fewer students than faculty in similar institutions without unions -- this resulted in a higher cost of instruction at colleges with unions; institutions with collective bargaining raised a greater percentage of their revenues from tuition and fees and state and local appropriations, while nonunion colleges received higher percentages from grants, gifts, contracts, and endowment income. (SW)

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A Comparison of Funding Priorities in Two Year Institutions With and Without Faculty Collective Bargaining

by

Loyd D. Andrew
College of Education
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia

and

Thomas A. Henry
Cumberland County College
Vineland, New Jersey

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ASHE Association for the Study of Higher Education
The George Washington University/One Dupont Circle, Suite 630/Washington, D.C. 20036
(202) 296-2597

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Introduction

In less than twenty years, approximately one-quarter of the institutions of higher education have chosen faculty bargaining agents to represent their interests when dealing with their employer. Observers, such as Crossland (1976), Lieberman (1979) and Jascourt (1981) have predicted that bargaining will increase in popularity on public campuses in the coming years. In the private sector, the condition may be otherwise. The Yeshiva Decision has resulted in many private institutions delaying further involvement with collective bargaining. Fiske (1982, p. C,1.) sums up the private sector situation with a quote from the AAUP's Jordan Kurland, "for the foreseeable future, collective bargaining is going nowhere in the private sector." The popularity of collective bargaining is greater among community colleges than among senior institutions. Nearly 64 percent of the college campuses with collective bargaining are two year institutions (Academic Collective Bargaining Information Servies (ACBIS), 1982). There has been considerable speculation on what this trend means for higher education, and some research has been done on why faculty join unions. In addition, there has been limited research comparing faculty salary gains at institutions with and without collective bargaining. But there has been no systematic research on whether two year colleges with bargaining differ from institutions without bargaining in terms of such vital institutional characteristics as financial viability (measured by several different ratios which will be identified later), size and faculty salaries.

Approximately 470 two year colleges have some form of faculty collective bargaining. The majority of the collective bargaining agreements have been written since 1970. A substantial amount of research has been conducted on the causes for the growth of collective bargaining in two year institutions and the effects of these agreements on faculty salaries (Garbarino, 1975; Ladd and Lipset, 1976; and Baldridge, 1978). Less effort has been made to determine the effects of bargaining on institutional viability and the allocation of resources. These issues are major areas of concern as higher education enters the eighties - a decade that is predicted to be detrimental to the health of higher education because of declining or stabilized enrollments and reduced "real" revenues.

Statement of the Problem

As noted, there has been considerable research on the causes of collective bargaining in higher education, while relatively little attention has been given to the economic effects of unions on (1) an institution's allocation of resources to instructional costs; (2) the revenue sources; (3) cost per FTE student; and (4) faculty-student ratio. Some research, with conflicting results, has been done on the economic benefits of collective bargaining to faculty. According to the Government Employee Relations Board (1979-1981), over 85 percent of faculty strikes were the result of economic issues. Chamberlain, 1978; Leslie and Hu, 1977; and Caruthers and Orwig, 1979 speculate that collective bargaining forces the institution to divert funds from educational support programs or to raise tuition and fees to pay the higher costs associated with contract settlements. However, their

studies did not collect substantial data to support their speculation. Little attention was given to determining how the institutions adjusted their revenues and/or expenditures to meet faculty salary demands at both union and non-union institutions. Nor was any attention directed toward studying the long-term effects of such budgetary reallocations on the institution's viability.

Studies in the mid-1970's (Birnbaum, 1974 and 1976; Morgan and Kearney, 1977; Brown and Stone, 1977; and Leslie and Hu, 1977) have compared salary and compensation increases between institutions with and without bargaining and found significant, positive gains by some faculty unions. However, these findings were not uniform for all higher education sectors. Birnbaum (1974, 1976) and Leslie and Hu (1977), found that faculty in two year institutions without collective bargaining fared as well or better than their colleagues at bargaining sister institutions. Marshall, 1979; Guthrie-Morse, 1981; and Horn, 1981 in slightly later studies, found that when local cost of living adjustments are included, faculty at two year institutions without collective bargaining enjoy similar or greater average salaries, by as high as eight percent as those in bargaining institutions. These studies, in general, have only looked at the effect of collective bargaining on average faculty salary.

Collective bargaining forces the administration to make decisions on the percent of the budget to be allocated to faculty salaries at a time when higher education is beset with a growing number of financial problems. These problems result from a leveling off or decrease in "real" dollar appropriations, inflation, enrollment slowdown or decline, increased costs associated with a prolonged policy of deferred

maintenance, and the increased costs of complying with federal and state regulations, planning and evaluation programs. It must be recognized that the cost of such compliance not only includes the direct costs associated with the immediate task but also includes the indirect costs in the form of planning and acquiring the personnel, equipment, time, and materials to perform the tasks.

Minter and Bowen (1982c, p. 8) found that the faculty, along with such items as maintenance and equipment replacement, have been made to bear an increasing burden of the institution's financial adjustments. Faculty, particularly in the public sector, have seen their salaries rise less rapidly than the administrative and general service staff salaries while their workload has increased and their working conditions deteriorated. From his studies of institutional viability, using a series of financial indicators or operating ratios selected from the HEGIS data base, Bowen (1980, pp. 9-10) suggests that reducing the front line expenditures in favor of behind-the-lines support may be an important barometer of the health of higher education. In neither the 1980 study or the 1982 reports, were there any attempt to differentiate between union and non-union colleges.

Purpose of the Study

The purpose of this study was to determine if two year colleges with faculty unions differ from two year colleges without unions in terms of selected institutional characteristics, including certain operating ratios, drawn from the HEGIS data base. The study will:

1. compare the percentage of expenditures allocated to instructional costs, including faculty salaries at two year colleges with faculty collective bargaining and those without

faculty bargaining;

2. compare the differences in monies obtained from various revenue sources between two year institutions with and without faculty collective bargaining;

3. determine the educational costs per FTE student at two year institutions with and without faculty collective bargaining;

4. compare the faculty-student ratio at two year institutions with and without faculty collective bargaining;

5. compare the average faculty salaries at two year institutions with and without faculty collective bargaining; and

6. compare average faculty salaries at two year institutions with faculty collective bargaining according to the national union affiliation.

The following variables will be used in this study:

1. faculty salaries / E & G expenditures + MT

2. fringe benefits / E & G expenditures + MT

3. total E & G expenditures + MT / FTE students

4. tuition and fee revenue / total current fund revenue

5. gov't appropriations: state / total current fund revenue

6. gov't appropriations: local / total current fund revenue

7. grants, gifts, contracts, endowment income / total current fund revenue

8. FTE enrollment / number of faculty

9. faculty salaries / number of faculty

10. instructional cost / E & G expenditures + MT

11. size (FTE students)

12. state

Methodology

The methodology involved obtaining data on and then comparing public two year colleges to observe the effects of faculty collective bargaining

on certain funding issues. These issues included the percentage of expenditures spent on instruction, the percentage of revenue obtained from various sources, the educational costs per FTE student, the faculty-student ratio, and the average faculty salary. Data for this study was obtained from the Higher Education General Information Survey (HEGIS) 1979-80 tapes on Financial Statistics, Institutional Characteristics, Fall Enrollment, and Salaries, Tenure, and Fringe Benefits of Full Time Instructional Faculty.

The initial population for this study consisted of approximately 926 public, two year institutions listed in the Directory of Colleges and Universities: 1979-80. Of this total population, 458 institutions (49%) had faculty collective bargaining as of August 11, 1981 (ACBIS, 1981). The population was then divided by state to determine the percentage of two year colleges with faculty bargaining in each state. Institutions were excluded from this study based on the following conditions: institutions without degree granting authority, institutions without a full time faculty, two year campuses of a university, institutions from states where all of the two year institutions have faculty bargaining units, and institutions who signed their initial collective bargaining agreement after 1976.

These exclusions resulted in a final population of 319 public, two year colleges, 189 of which had faculty bargaining units and 130 which did not have faculty bargaining. The 319 are located in the following fourteen states:

California Maryland Oregon

Florida	Michigan	Pennsylvania
Illinois	Nebraska	Washington
Iowa	New York	Wisconsin
Kansas	Ohio	

Data on the status, union affiliation, and length of time collective bargaining has existed on a particular campus was obtained from the Academic Collective Bargaining Information Service and the Douglas and Kramer study (1982) sponsored by the National Center for the Study of Collective Bargaining in Higher Education and the Professions in New York City. Discrepancies between the two sources of data and missing data were resolved by telephone calls to the institutions.

The statistical Analysis System (SAS) was used to extract data from the HEGIS tapes and for the complete statistical analysis. The SAS PROC MEANS procedure was used to obtain the mean, standard deviation, minimum value, maximum value, the sum, standard error of the mean, and the student's t value. These statistics were obtained for all 319 institutions in the population, as (1) the institutions combined and (2) institutions divided according to the presence or absence of faculty collective bargaining.

Results

A profile of community colleges with collective bargaining and without collective bargaining was developed following the procedures outlined above. The profile of institutions was developed in five areas: instructional costs, sources of income, faculty/student ratio, expenditures per FTE student, and average faculty salary. Table 1 shows the percentage of E & G expenditures for both types of institutions for

instructional costs. The instructional costs are further broken down to show that institutions with faculty bargaining spent a greater percentage on salaries and fringe benefits than institutions without faculty bargaining. The percentage of E & G expenditures for instructional costs for both groups of institutions were subjected to a two-tailed t-test and found to be significantly different beyond the 0.01 level of confidence ($t = 95.26$).

Table 2 shows the difference in the sources of income between institutions with faculty bargaining and without faculty bargaining. Institutions with faculty bargaining receive a higher percentage of their revenue from tuition and fees, state appropriations, and local appropriations than non-bargaining institutions. Conversely, institutions without faculty bargaining receive a higher percentage of their revenue (0.095% versus 0.08%) from grants, gifts, contracts, and endowment income. In addition, non-bargaining institutions raise a greater percentage of funds from the residual sources (17.6% versus 4.3%) than do institutions with faculty bargaining. The HEGIS lines that contribute to the residual sources include: government appropriations - federal, sales and services of educational activities, sales and services of auxiliary enterprises, sales and services of hospitals, other sources, and independent operations. The t-tests on all sources of revenue between the two types of institutions revealed significant differences for each revenue source.

Table 3 summarizes the results of comparing means of institutions with and without faculty bargaining with respect to faculty-student ratio, E & G expenditures per FTE student, and average faculty salary.

Institutions with faculty bargaining had a ratio of 1:48.7 compared to a ratio of 1:56 in institutions without faculty bargaining. Institutions with bargaining also expended a greater amount per FTE student ($2019 v. $1814) than institutions without faculty bargaining. Faculty in institutions with bargaining earned a higher average salary ($17,175 v. $16,645) than their colleagues at institutions without bargaining. In each case, the t-test showed significant differences between the groups.

Table 4 presents the results of average faculty salary by the type of bargaining unit affiliation. The relatively small number of institutions affiliated with the AAUP, or those that are not affiliated with any national organization, prevents an accurate analysis of their success. Faculty bargaining units affiliated with the AFT enjoy a slight economic advantage over bargaining units affiliated with the NEA.

Discussions

The data shows that both groups of institutions devoted the majority of expenditures to instructional costs. The means, 0.58 for institutions with faculty bargaining and 0.574 for institutions without faculty bargaining, compare very well with the NACUBO (1980) and Bowen (1981) studies that contain data on instructional costs. The NACUBO study of Comparative Financial Statistics for community colleges (Cirino and Dickmeyer, 1981) found the median for instructional expenditures in 1979-80 to be 50.9 percent. Bowen (1981) used a different formula to determine teaching expenditures but found a median of 56 percent in public, two year colleges. The percentage of instructional costs that goes to salaries and benefits is significantly higher in institutions with faculty bargaining. Conversely, institutions without faculty

bargaining spend a significantly higher amount on the non-salary costs of instruction.

The data on revenue sources shows that institutions with faculty bargaining raised a greater percentage of their income from tuition and fees. In addition, bargaining institutions received higher allocations from state and local governments than did institutions without faculty bargaining. These findings support the findings of Leslie and Hu (1979) that collective bargaining has a significant impact on student tuition and fees. However, the data fails to support Marshall's (1979) assertion that local and state officials may provide greater support to non-union institutions in any attempt to reduce union activity.

The findings of higher percentages of income from grants, gifts, contracts and endowment income in institutions without faculty bargaining raises an interesting question. Do these findings support the claim of Bennett and Johnson (1979) that collective bargaining diverts educational resources to contract negotiations and dispute settlements? The percentage of total revenue generated from these sources together with the larger percentage generated from the residual income sources clearly demonstrates that institutions without faculty bargaining are much more successful in obtaining funds from non-traditional sources. Whether this is due to the fact that the institutions with faculty bargaining do not have the flexibility to devote funds of those kinds of fund-raising activities or due to different institutional priorities goes beyond the scope of this study.

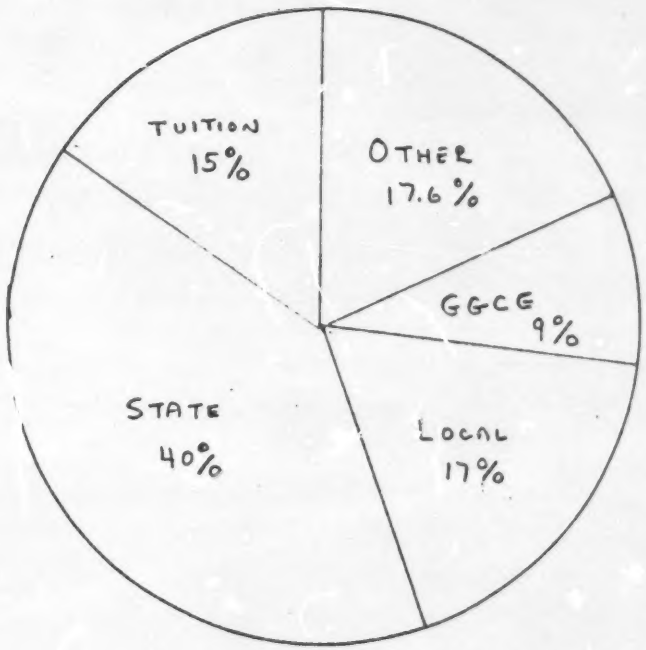
The data on the other three aspects of this study, faculty-student ratio, expenditures per FTE student, and average faculty salary, show a

consistent pattern. Fewer students per faculty member and higher faculty salaries mean a higher cost of instruction at institutions with collective bargaining. It appears that in addition to negotiating higher salaries for the faculty, institutions have also agreed to some limits on class size. Therefore they do not have the flexibility to offset their higher personnel costs with increased productivity - more students in the classroom. The $530 salary advantage enjoyed by faculty with collective bargaining represents one of the highest gains reported to date and contradicts the findings of Marshall (1979) and Horn (1981) who reported a greater average faculty salary in institutions without collective bargaining.

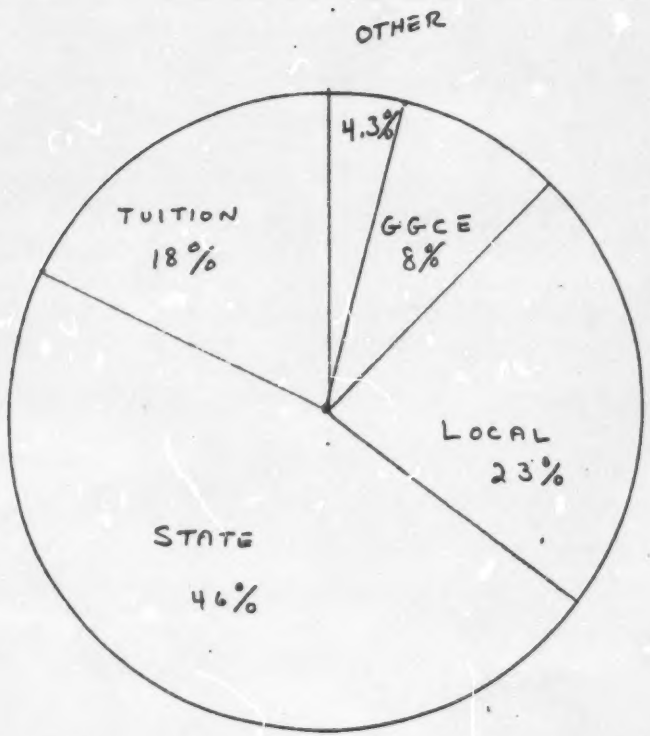
In conclusion, this study shows that faculty at two year public colleges with collective bargaining earn a higher average salary and teach fewer students than faculty in similar institutions without collective bargaining. The study also showed that institutions with faculty collective bargaining raised a greater percentage of their revenues from tuition and fees, and state and local appropriations.

TABLE 1 - COMPARISON OF THE MEAN PERCENTAGE OF E & G EXPENDITURES ALLOCATED TO INSTRUCTIONAL COSTS, FULL TIME FACULTY SALARIES AND BENEFITS BETWEEN INSTITUTIONS WITH AND WITHOUT FACULTY COLLECTIVE BARGAINING

	WITHOUT C.B.	WITH C.B.
$\frac{\text{INSTRUCTIONAL COSTS}}{\text{E \& G EXPEN. + MT}}$	57.4	58.0
$\frac{\text{FACULTY SALARIES}}{\text{E \& G EXPEN. + MT}}$	21.0	23.0
$\frac{\text{FRINGE BENEFITS}}{\text{E \& G EXPEN. + MT}}$	0.016	0.02



NON CB



CB

TABLE 2 - PERCENT OF REVENUE FOR TWO YEAR INSTITUTIONS WITH AND WITHOUT FACULTY COLLECTIVE BARGAINING BY SOURCE OF REVENUE

TABLE 3 - COMPARISON OF VARIOUS INSTITUTIONAL RATIOS BY THE PRESENCE OR ABSENCE OF FACULTY COLLECTIVE BARGAINING

	institutions without CB	institutions with CB
faculty-student ratio	1:56	1:48.7
E+G expend/FTE	$1814	$2019
AVG FACULTY SALARY	$16,645	$17,175

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